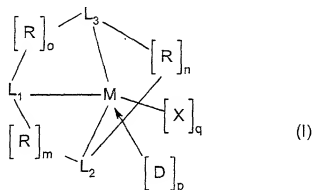


## Abstract

1. The invention concerns olefin polymerization catalyst component comprising an organometallic compound of general formula I



wherein:

M is a transition metal of groups 3, 4-10, lanthanide or actinide of the periodic table of the elements; each R is independently a structural bridge rigidly connecting two ligands L<sub>1</sub>, L<sub>2</sub> and L<sub>3</sub> and is constituted by 1 to 4 chain atoms selected from carbon, silicon, germanium, oxygen, boron; m, n and o are 0 or 1, with the proviso that m+n+o is 2 or 3; L<sub>1</sub> is a ligand of the cyclopentadienyl type or is isolobal to cyclopentadienyl, L<sub>2</sub> is a ligand of the cyclopentadienyl type or is isolobal to cyclopentadienyl, or a monovalent anionic ligand selected from the group consisting of N, P, B when m+n =2, it is selected from the group consisting of NR<sup>1</sup>, PR<sup>1</sup>, BR<sup>1</sup>, O and S when m+n =1;

L<sub>3</sub> is a monovalent anionic ligand selected from the group consisting of N, P, B when n+o =2, it is selected from the group consisting of NR<sup>1</sup>, PR<sup>1</sup>, BR<sup>1</sup>, O and S when n+o =1; R<sup>1</sup> is hydrogen, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>3</sub>-C<sub>20</sub> alkenyl, optionally comprising 1 to 5 heteroatoms such as Si, N, P, O, F, Cl, Br; each X is independently selected from the group consisting of hydrogen, halogen, NR<sup>2</sup>, R<sup>2</sup> with R<sup>2</sup> equal to C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>1</sub>-C<sub>20</sub> alkyl, C<sub>3</sub>-C<sub>20</sub> cycloalkyl, C<sub>6</sub>-C<sub>20</sub> aryl, C<sub>3</sub>-C<sub>20</sub> alkenyl, optionally comprising 1 to 5 heteroatoms such as Si, N, P, O, F, Cl, Br; q is a number whose value is: 0, 1, 2 or 3, depending on the valence of the metal M; D is a neutral Lewis base, p is a number whose value is: 0, 1, 2 or 3.

The invention also concerns catalysts comprising compounds of formula (I) and the polymerization process making use of a catalyst comprising the claimed compounds.